CSA0961 – JAVA

PRACTISE 4_1

1. The formula for converting gallons to liters is: 1 US gallon = 3.785 liters. This program will convert a specific number of gallons (10) to liters and then display the output. The concepts in this practice will be explored in more detail throughout the course. Create a new project, package, and java class with a main method. Use the code below as a starting point and complete the code for the program. (Name your package galToLit and class GalToLit).

package galToLit;

public class GalToLit {

public static void main(String[] args) {

// declare variables double gallons=10;

double liters=0; // add your calculation here //output the result to user

System.out.println(gallons+" gallons equals "+liters+" liters"); } }

ANSWER :

package helloworld;

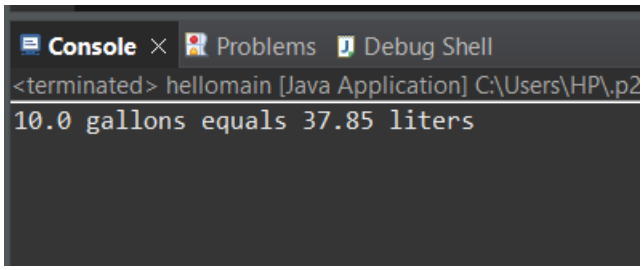
public class hellomain {

```
    public static void main(String[] args) {
        // declare variables
        double gallons = 10;
        double liters = 0;

        // add your calculation here
        liters = gallons * 3.785; // 1 US gallon = 3.785 liters

        // output the result to user
        System.out.println(gallons + " gallons equals " + liters + " liters");
    }
}
```

OUTPUT :



2. The Scanner class can be used to accept input from the user. Modify the code written in step 2 to prompt a user for the number of gallons to compute. To declare an instance of the Scanner class, use the code below: Scanner in = new Scanner(System.in); Your Java IDE may prompt you to import the java.util.Scanner package, or you can manually enter the import statement between the package name and the class declaration as shown below:

package galToLit;

import java.util.Scanner;

public class GalToLit {

To get a decimal value from the user, use the in.nextDouble() method and assign to the gallons variable.

ANSWER :

```
package helloworld;


import java.util.Scanner;


public class hellomain {
    public static void main(String[] args) {
        // Create a Scanner object to read input
        Scanner in = new Scanner(System.in);


        // Declare variables
        double gallons = 0;
        double liters = 0;


        // Prompt the user for the number of gallons
        System.out.print("Enter the number of gallons: ");
```

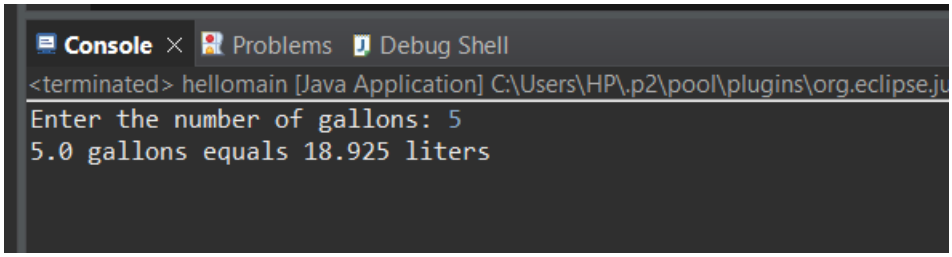
```
        // Get the number of gallons from user input
        gallons = in.nextDouble();

        // Perform the conversion
        liters = gallons * 3.785; // 1 US gallon = 3.785 liters

        // Output the result to the user
        System.out.println(gallons + " gallons equals " + liters + " liters");

        // Close the scanner
        in.close();
    }
}
```

OUTPUT :



3. 3. The Scanner class can be used to accept input from the user. Modify the code written in step 2 to prompt a user for the number of gallons to compute. To declare an instance of the Scanner class, use the code below: Scanner in = new Scanner(System.in); Your Java IDE may prompt you to import the java.util.Scanner package, or you can manually enter the import statement between the package name and the class declaration as shown below: package galToLit; import java.util.Scanner; public class GalToLit { To get a decimal value from the user, use the in.nextDouble() method and assign to the gallons variable

```
package helloworld;

import java.util.Scanner;

public class helloworld {



        public static void main(String[] args) {
                // TODO Auto-generated method stub
Scanner in = new Scanner(System.in);
```

```
        // prompt user for the number of gallons
        System.out.print("Enter the number of gallons: ");
        double gallons = in.nextDouble();

        // declare variable for liters
        double liters = 0;

        // calculate liters
        liters = gallons * 3.785;

        // output the result to user
        System.out.println(gallons + " gallons equals " + liters + " liters");

        // close the scanner
        in.close();
    }
}
```